Lockheed Martin
Scientific Engineering, Response and Analytical Services
2890 Woodbridge Avenue Building 209
Edison, NJ 08837-3679
Telephone 732-321-4200 Facsimile 732-494-4021

DATE: June 11, 2012

TO: Kelley Chase, EPA Region 3 OSC
Cynthia Caporale, EPA Region 3 OASQA

THROUGH: Ex. 4 - CBI SERAS Program Manager

FROM: Ex. 4 - CBI SERAS QA/QC Officer

SUBJECT: VERIFICATION/COMPLETENESS CHECK – DIMOCK, PA LABORATORY DATA
File 1205012 FINAL R33992 06 06 12 1230.pdf

INTRODUCTION

On June 11, 2012, a review of the case narratives and corresponding certificates of analysis from the EPA R3 (Metals Report Posted June 6) was conducted at the SERAS facility in accordance with the Follow-Up Verification/Completeness Check agreed upon during our teleconference on Wednesday 2/8/12.

The assumptions for this review include the following: 1) Case narratives from the Regional labs and/or subcontract labs have been reviewed in accordance with Regional or Environmental Services Assessment Team (ESAT) protocols and contain all pertinent and complete information to conduct the completeness check. SERAS will base this review on the information provided by the laboratory and not on an actual data package; and 2) SERAS will relay any "red" flags to the EPA R3 personnel to resolve and determine data usability.

OBSERVATIONS

In accordance with Table 1 – Field and QC Sampling Summary (Rev01 - 2/3/12), Table 2 – Sample Analytical Requirements Summary (Rev01 – 2/3/12), Methods for Groundwater and Surface Water Samples and the R3 SOPs R3QA159-021511 for ICP and R3QA-116-021511 for ICP-MS, the following observations were noted and need to be clarified/resolved.

File 1205012 FINAL R33992 06 06 12 1230.pdf

1. All samples for lithium in project #DAS R33992 are reported down to a Reporting Limit of 25µg/L; however, the method blanks are reported to 200µg/L. If the method blanks were not analyzed with the same low standard as the samples, then the sample RLs should be raised to the concentration reported for the method blanks. Alternatively, if the samples and blanks were analyzed using the same low standard, then the analytical report needs to be corrected to reflect the correct method blank RLs.
2. The case narrative states that the detectable results for uranium were qualified estimated "J" due to a quality control sample outside of acceptance limits. Based on the information supplied in the analytical report, it is unclear what QC sample is outside of acceptance limits. Please clarify with the appropriate recoveries.
3. The case narrative states that sample results for aluminum, boron, lead and lithium for sample HW06_R2 were qualified estimated "J" due to a quality control sample outside acceptance limits. No QC information is available for boron for Batch BE23003. Based on the information supplied in the analytical report, the LCS recovery for lithium is 125%, which is outside the 85-115% range. In addition, the RPD for aluminum exceeds the 20% criterion. Based on this information, the lithium result for sample HW06_R2 should be qualified estimated high (J+) and the aluminum result estimated (J). It is unclear what QC sample is outside of acceptance limits for boron and lead. Please clarify with the appropriate recoveries.
4. For sample IDW-01, it is unclear what set of QC should be used to qualify samples. Please clarify that this sample was analyzed with Batch BE22502.
5. The following samples had analytes that exceeded the federal maximum contaminant levels (MCLs):

Lockheed Martin
Scientific Engineering, Response and Analytical Services
2890 Woodbridge Avenue Building 209
Edison, NJ 08837-3679
Telephone 732-321-4200 Facsimile 732-494-4021

Aluminum for HW06_R2; iron for HW06_R2; and manganese for HW07_R2 and HW08a_R2 and HW08-F_R2. IDW-01 is not a drinking water sample so any concentrations exceeding the MCLs are not included in the list.

6. There were several non-typical metals that were detected in some of the drinking water samples for which no MCLs are available: Boron for HW06_R2 and HW06-F_R2, uranium for HW04_R2, HW04-F_R2, HW07_R2, HW08a_R2 and HW08a-F_R2; and lithium for HW06_R2 and HW06-F_R2.
7. It is assumed that all required instrument QC in the method was run (with the exceptions noted in the case narrative) and was within the criteria listed in the EPA R3 SOPs since this information is not available in the laboratory report.

cc: John Gilbert, ERT WAM
Gary Newhart, ERT WAM
Ex. 4 - CBI SERAS Task Leader
Ex. 4 - CBI SERAS Environmental Technician